08/786360

SELF-LUBRICATING COMPOSITE CONTAINING CHROMIUM OXIDE

Abstract of the Disclosure

A self lubricating, friction and wear reducing composite material useful over a wide temperature range of from cryogenic temperature up to about 900°C contains 60 - 80 wt. % of particulate Cr_2O_3, dispersed in a metal binder of a metal alloy containing Cr and at least 50 wt. % of Ni, Cr or a mixture of Ni and Cr. It also contains 5 - 20 wt. % of a fluoride of at least one Group I, Group II,or rare earth metal and, optionally, 5 - 20 wt. % of a low temperature lubricant metal. Such as Ag, Au, Pt, Pd, Rh and Cu. This composite exhibits less oxidation instability and less abrasiveness than composites containing chromium carbide, is readily applied using plasma spray and can be ground and polished with a silicon carbide abrasive.